

# Contents

## Part I – Education in Mathematics

1. **G. Ambrus, N. K. Rácz, Ö. Vancsó** – *How Hungarian teachers think about combinatorics and its teaching* \_\_\_\_\_ 11
2. **M. Billich** – *GeoGebra and problems of tangent circles* \_\_\_\_\_ 23
3. **M. Ziółkowski, L. Stępień, M. R. Stępień, A. Gola** – *Applications of Python programs in solving of equations based on selected numerical methods* \_\_\_\_\_ 31

## Part II – Mathematics and Its Applications

1. **J. M. Jędrzejewski** – *On monotonicity of real functions* \_\_\_\_\_ 49
2. **Y. Povstenko, J. Klekot** – *Fractional heat conduction in an infinite rod with heat absorption proportional to temperature* \_\_\_\_\_ 61
3. **A. Szynal-Liana, I. Włoch** – *Some properties of generalized Tribonacci quaternions* \_\_\_\_\_ 73

## Part III – Computer Science

1. **M. Copik, A. Rataj, B. Woźna-Szcześniak** – *A GPGPU-based Simulator for Prism: Statistical Verification of Results of PMC* - 85
2. **N. Kniazieva, S. Shestopalov, W. Susłow, A. Yatsko** – *The Concept of Implementation of the Decentralized Application Level Structure for Providers of a Typical Next Generation Network* – 99
3. **M. Selianinau** – *Theoretical and methodological bases of modular technology of parallel tabular computations using universal processors*  
117

- 
4. **M. Selianinau** – *Tabular minimal redundant modular structures for fast and high-precision computations using general-purpose computers* \_\_\_\_\_ 129
  5. **P. Zając, M. Matalytski** – *Expected Volumes of Requests in Systems of the Queueing Network with a Limited Number of Waiting Places* \_\_\_\_\_ 141
  6. **A. M. Zbrzezny** – *Comparing SAT- and SMT- based bounded model checking for ECTL properties* \_\_\_\_\_ 161